REMARKS

The Office action dated November 30, 2004 and the cited references have been carefully considered.

Status of the Claims

Claims 5-27 are pending.

Claims 5-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-25 of copending Application No. 10/793,376. Since the present application is the senior application, the Applicants respectfully request that this double patenting is held in abeyance until the claims of the present application are allowed. At that time, a terminal disclaimer may be filed, if appropriate.

Claims 7, 10, and 27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Specifically, these claims are rejected because of inadvertent typographical errors. These typographical errors are corrected. Therefore, this rejection is now overcome.

Claims 5-27 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Sieving et al., Bioconjugate Chem., 1990, Vol. 1, No.1, pp. 65-71 (hereinafter "Sieving"). The Applicants respectfully traverse this rejection for the reasons set forth below.

Claim rejection Under 35 U.S.C. § 103(a)

Claims 5-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sieving. The Applicants respectfully traverse this rejection because Sieving does not teach or suggest all of the limitations of each of claims 5-27.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." M.P.E.P. § 2143.03 (8th ed., Rev. 2, May 2004).

Sieving discloses only a molar ratio of DTPA anhydride to lysine residues less than or equal to 4. For example, on page 67, under the section entitled "Synthesis of PL-DTPA and PL-DOTA," Sieving states that "[a] 4-fold molar excess of mixed anhydride with respect to ε-amines was satisfactory." On page 66, under the sections entitled "Synthesis of DTPA Mixed Anhydride" and "Synthesis of PL-DTPA," Sieving discloses a molar ratio of DTPA anhydride to lysine residues of 3.35. (This molar ratio is calculated from the disclosed data, as follows: 4 mmol of DTPA was used; 0.250 g of poly-L-lysine hydrobromide was used. This poly-L-lysine has a degree of polymerization of 105, and a MW of 22,000. Thus, the number of lysine residues in 0.250 g was 1.1932 mmol. Therefore, the molar ratio of DTPA anhydride to lysine residues was 4/1.1932 or 3.35.)

In addition, Sieving cooled his second solution to only -30 ^{0}C. This temperature coupled with Sieving molar ratio of less than 4 resulted in only 80-90% conjugation degree.

In contradistinction, amended claim 5 and all claims dependent therefrom (claims 6-27) recite that a molar ratio of DTPA anhydride to lysine residues is greater than or equal to 6, and that the second solution is cooled down to less than -35 ^{0}C. Therefore, Sieving does not teach or suggest all of the limitations of each of claims 5-27. The recited conditions provided the very high degrees of conjugation that had not been possible before. This achievement of the present invention also is proof of non-obviousness over the prior art.

Since Sieving does not teach or suggest all of the limitations of each of claims 5-27, these claims are patentable over Sieving.

In view of the above, it is submitted that the claims are patentable and in condition for allowance. Reconsideration of the rejection is requested. Allowance of claims at an early date is solicited.

Respectfully submitted,

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